

**Department of the Interior**

**U.S. Geological Survey**

**Northwest Climate Science Center**

**Tribal Engagement Strategy, 2012-2015**

FINAL



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## Introduction

On September 14, 2009, the Secretary of the Interior issued Order No. 3289 (<http://www.doi.gov/whatwedo/climate/strategy/index.cfm>), which provides guidance to Department of the Interior (DOI) bureaus to address “the impacts of climate change on America’s water, land, and other natural and cultural resources.” The order emphasizes that the DOI “must address the impacts of climate change on American Indians and Alaska Natives, for whom the Department holds trust responsibilities on behalf of the federal government.” The order also notes that the DOI will engage in government-to-government consultation with tribes and Alaska Natives on DOI climate change initiatives.

The secretarial order established a national network of eight regional climate science centers (CSCs) with the mission to provide objective scientific information and tools that tribal and other managers of land, water, wildlife, and cultural resources can use to anticipate, monitor, and adapt to climate change. In the Northwest, this mission is carried out by the Northwest Climate Science Center (NW CSC or Center). The national network of regional CSCs is managed by the U.S. Geological Survey (USGS) National Climate Change and Wildlife Science Center (NCCWSC).

The NW CSC developed a Strategic Plan for 2012-2015 (<http://www.doi.gov/csc/northwest/Northwest-CSC-Strategic-Plan.cfm>) to help it reach its vision *to become nationally recognized as a best-practice model for the provision of climate science and decision support tools to address conservation and management issues in the Northwest Region*. The NW CSC is committed to collaborating with tribes on all aspects of its Strategic Plan, which focuses on the delivery of executive, science, data, communication, and education and training services. To help guide this effort, the NW CSC developed the NW CSC Tribal Engagement Strategy (this document).

## Purpose and Scope

The purpose of this tribal engagement strategy is to describe the opportunities for collaboration between the NW CSC and 52 Native American tribes within its geographic area. This engagement strategy may be refined as necessary, or during the periodic revisions of the NW CSC Strategic Plan. If successful, the outcome of this mutual engagement between the NW CSC and Northwest tribes will allow tribes to be better prepared to anticipate, monitor, and adapt to climate change.

## Description of Federally Recognized Native American Tribes within the NW CSC Area

The geographic area of the NW CSC includes Oregon, Washington, Idaho and western Montana (fig. 1). The Center has identified 52 federally recognized Native American tribes that have Reservations and/or treaty and reserved rights to natural and cultural resources interests in the area (appendix 1). A few of these tribes may also be within the areas of neighboring CSCs, such as the North Central and Southwest CSCs (fig. 2).

The landscapes occupied by Northwest tribes range from wet coastal to dry interior lands, and the natural and cultural resources in these areas vary accordingly. Tribal communities throughout the Northwest are especially vulnerable to climate change because most have a significant relationship with natural resources, such as salmon, shellfish, wildlife, timber, and rangelands, to sustain their economies and traditional way of life.

## Strategy for Tribal Engagement

As stewards of natural and cultural resources, Northwest tribes need scientific information, tools, and techniques to anticipate, monitor, and adapt to climate change. It is an important part of the mission of the NW CSC to help provide this information. To be effective in carrying out this aspect of its mission, the Center relies on input from tribal representatives on the Executive Stakeholder Advisory Committee (ESAC; <http://www.doi.gov/csc/northwest/ESAC.cfm>) to help it prioritize research needs, and it also relies on close collaboration with tribes to facilitate transfer of research results back to tribal resource managers. The ESAC assembles executive representatives of federal, tribal, and state agencies and organizations to identify the annual and long-term science priorities of the NW CSC.

Full engagement between the Center and Northwest tribes offers unique opportunities linked to the intimate familiarity that tribes have with the landscapes and resources affected by climate change. These insights into ecosystem processes and responses to environmental change are referred to as Traditional Ecological Knowledge (TEK), which tribes have acquired and passed down through generations adapting continuously to gradually changing environments. The dynamic interplay between TEK and Western science may provide a strong foundation for the understanding of climate effects on tribal resources. There are some real challenges, however, that may hinder the anticipated level of engagement. For example, maintaining effective communication with a large number of tribes distributed over a multi-state area, the limited availability of tribal staff with many demands on its time, and the fact that individual tribes cannot speak for other tribes because each is a sovereign nation, will require patience, commitment, and a shared willingness to discover and learn.

The NW CSC Strategic Plan for 2012-2015 is the foundational document describing all aspects of the Center's direction, operation, and allocation of resources. The Strategic Plan provides opportunities for tribal engagement in each of its five core elements, including executive services, science services, data services, communication services, and education and training services.

## Executive Services

The objective of NW CSC Executive Services is *to provide leadership, guidance, and support for climate-related activities through coordination and engagement with relevant stakeholders*. To help meet this objective, the NW CSC receives guidance through the ESAC from Northwest tribal leaders and senior leadership of federal and state resource-management agencies on the long- and short-term climate science priorities in the Northwest. Those priorities help determine the selection of climate-science studies that the NW CSC funds annually. In addition to helping set the NW CSC science agenda, the ESAC also serves as a forum for engagement among scientists and resource managers to a)

identify the most useful types of scientific information and resource management tools, b) highlight climate science educational opportunities and needs, and, in general, c) evaluate how the NW CSC can best serve tribes and stakeholders by providing useful, relevant, tools and information of value to the management of cultural and natural resources in the Northwest.

The NW CSC has invited all 52 tribes in its area (appendix 1) to engage in informal dialogue and formal government-to-government consultation. In addition, the NW CSC has invited tribes to participate in ESAC meetings and nominate tribal representatives as committee vacancies occur. ESAC participation may be direct or through the three tribal organizations that are currently (2013) ESAC members [Columbia River Inter-Tribal Fish Commission (CRITFC), the Northwest Indian Fisheries Commission (NWIFC), and the Affiliated Tribes of Northwest Indians (ATNI)].

## Science Services

The objective of Science Services is *to develop and implement a comprehensive Science Agenda to address current and emerging climate priorities in the Northwest*. To help meet this objective, the NW CSC solicits guidance from the ESAC in identifying climate science priorities in the Northwest. For 2012-2015, these priorities are described in the NW CSC Science Agenda (<http://www.doi.gov/csc/northwest/Climate-Science-Agenda.cfm>), which organizes key science needs into seven interrelated research themes ranging from *climate science and modeling* to *vulnerability and adaptation*. While all Science Agenda themes are relevant to tribal resource managers and provide opportunities for tribal involvement, two of them are particularly important as they make specific reference to tribal resources and TEK:

Vulnerability and Adaptation – “Identify vulnerabilities of physical and biological systems and landscape characteristics critical to Native American tribes. These efforts must consider the unique relation between tribes and the landscape, and the large degree to which tribes rely on the landscape for their economic well-being and cultural identity.”

Data Infrastructure, Analysis, and Modeling – “Expand retrospective analyses of the response of physical and biological systems to historical climate and advance paleoclimate research. This effort needs to occur at a range of scales and, where possible, incorporate traditional knowledge.”

The NW CSC strives to be responsive to the science needs of the Northwest tribal community. Such needs are articulated not only during ESAC deliberations and other direct contact between tribes and the NW CSC, but also through the input received from regional Landscape Conservation Cooperatives (LCCs), and other regional partners and networks. Studies currently (2013) supported by the NW CSC address the response of hydrologic systems, including streams, lakes, and wetlands, to future climates; investigate how changes in sea-level rise may affect nearshore habitats; predict how climate change may impact fish, wildlife, and plants in the Northwest; and develop models linking the sensitivity of species and habitats to climate change. The anticipated results may hold great value for indigenous communities. Areas where the NW CSC could greatly benefit from tribal expertise and contributions include improving understanding of changes in phenology (relative timing of biological phenomena such as flowering and animal migration in response to environmental variability and

change) and assessing climate-related increases in the vulnerability of First Foods and other plant and animal species of cultural significance.

NW CSC-funded studies are led by USGS and/or university-consortium partners and there is strong desire to conduct these studies in collaboration with other partners, including tribes. In 2013, for example, the portfolio of tribal projects supported by the NW CSC continued to grow, bringing the total number of projects to five. One of these projects, selected for direct NW CSC funding, will analyze the effects of climate change on selected plant species of key cultural significance to the Port Gamble S'Klallam Tribe in the northern and eastern Olympic Peninsula, WA. The other four projects were selected for joint funding by the NW CSC, the Alaska CSC, and the North Pacific LCC. This collection of climate-related projects underscores the NW CSC emphasis on providing enhanced services to the Native American community. It also documents the Center's determination to enter collaborative partnerships that help leverage limited resources and address shared priorities. Joint partnerships of this kind will significantly further the fulfillment of the NW CSC Science Agenda and the delivery of science services of relevance to tribes.

## Data Services

The objective of Data Services is *to collect and secure climate data, while providing timely access, analytical functions, and interpretive services*. To help meet this objective, the NW CSC requires that studies it funds prepare plans for the proper management, sharing and security of data and metadata. This includes existing data compiled for the purpose of a study, as well as data newly generated by a study. Data are made available to researchers and the public through on-line data repositories and dedicated NW CSC portals. The NW CSC makes information accessible and discoverable by Northwest tribes, so that their communities can benefit and learn from work already done, and contribute their own knowledge to databases available to other users. The NW CSC is also perfecting methods and tools for the interoperability of data from different spatial and temporal scales and disciplines. This effort will aid the integration of empirical data collected through studies or passed down through TEK.

The NW CSC recognizes that knowledge and data held by indigenous people may be sensitive and that tribes may not wish to publicly share information from studies that use a TEK approach. The NW CSC respects the need for sensitivity and heightened awareness when working with tribal partners. The NW CSC will work with tribes at the beginning of studies to identify potential issues and find a path forward that meets tribal needs and provides as much access to valuable data and products as possible.

NW CSC data management is performed by the U.S. Geological Survey and the *Northwest Knowledge Network* (NKN, <http://www.northwestknowledge.net>) based at the University of Idaho, jointly serving partner institutions and organizations throughout the Northwest.

## Communication Services

The objective of Communication Services is *to provide professional communication and outreach services that support the exchange of information among regional stakeholders, and effectively raise awareness of climate issues in the Northwest*. To help meet this objective, the NW CSC developed a communication strategy that was adopted by the ESAC on March 20, 2013 (<http://www.doi.gov/csc/northwest/upload/NW-CSC-Communication-Strategy-ADOPTED-20MAR13-2.pdf>).

The NW CSC Communication Strategy identifies two overarching goals subdivided into seven objectives, with specific target audiences identified for each. Tribes are recognized as members of each of these audiences, including *scientists; resource managers; legislators, policy makers, and administrators; and the general public*.

Effective communication between tribes and the NW CSC is fundamental to achieving the goal of helping Northwest tribes prepare to anticipate, monitor, and adapt to climate change. Such dialogue may be enriched by aspects of TEK that tribes feel comfortable sharing publicly to help address climate-change challenges throughout the Northwest.

As part of its communication strategy, the NW CSC anticipates organizing and collaborating in meetings, conferences, and/or workshops with Northwest tribal and other resource managers and scientists for the purpose of a) jointly identifying high-priority science needs, b) transferring scientific findings and tools to resource managers, and c) obtaining feedback from resource managers about the usefulness of scientific information and tools. As opportunities arise, these gatherings may be planned jointly and held in concert with interested LCCs and other federal entities in order to pursue efficiencies and reduce the administrative burden on tribal participants as much as possible. Because tribes may have unique climate science needs, the NW CSC is open to the possibility of organizing and collaborating in meetings, conferences, and/or workshops focused exclusively on tribes, subject to available resources. It is recognized that face-to-face meetings may create an undue burden in tribal time and expense, and thus teleconferencing would be used whenever feasible. There is great value in having at least some face-to-face meetings, however, and the NW CSC would facilitate such meetings by holding them in central locations or combining them with other activities, such as regional tribal meetings.

The effectiveness of communication between Northwest tribes and the NW CSC will be evaluated by soliciting feedback from targeted tribal representatives about the various communication approaches. The NW CSC will use all evaluation findings to strengthen its tribal engagement strategy.

## Education and Training Services

The objective of Education and Training Services is *to promote broad participation by and support education of diverse young scientists in the work of the NW CSC*. To help meet this objective, the NW CSC and its university-consortium partners (Oregon State University, the University of Idaho, and the University of Washington) host the annual Climate Boot Camp (CBC), which supports and trains graduate students and early career professionals for work at the interface of research on climate and resource management decision-making. The CBC is a unique, week-long interdisciplinary program that includes classroom and outdoor education, group and individual study, social activities, and visits to



research field sites. The curriculum provides participants with education on climate drivers, communication of climate science and impacts, and integration of TEK and western science. In addition, the curriculum also exposes students to collaborative science across disciplines and fosters a better understanding of the processes for applying new knowledge to natural and cultural resource management.

The CBC brings together climate change experts, graduate students, early-career scientists from multiple CSCs and Northwest universities, and scientists and resource managers from tribes, federal government agencies, and non-governmental organizations. Resource experts who teach at the camp are researchers and educators from universities and practicing professionals from organizations and agencies. This mix of participants affords a great opportunity for networking among peers and instructors with similar interests and who face similar challenges.

The NW CSC invites tribal participation as both students and instructors at the CBC to highlight tribal perspectives on climate-impacts science, communication of science, and the application of science in the management of tribal natural and cultural resources.

Another educational opportunity offered by the NW CSC is the Graduate Fellows program. As part of this program, the NW CSC supports multiple graduate students pursuing climate change research at the universities of its primary consortium partners (Oregon State University, the University of Idaho, and the University of Washington). In addition, tribal members and organization such as the American Indian Science and Engineering Society (<http://www.aises.org/>) or the Society for the Advancement of Chicanos and Native Americans in Science ([www.sacnas.org](http://www.sacnas.org)) will be invited to work with the NW CSC and its university-consortium partners to explore opportunities for climate science student internships and post-doctoral appointments.

The NW CSC recognizes that engaging tribal students is important to nurture future generations of climate scientists and resource managers, scientists and resource managers. Although the resources of the NW CSC are limited for this purpose, the NW CSC invites tribes to jointly deliberate how to best pursue this early engagement both inside and outside the Northwest region. There are three tribal colleges in the area of the NW CSC (Blackfeet Community College, Northwest Indian College, and Salish Kootenai College) that will be invited to engage with the NW CSC to explore climate science educational opportunities. Other opportunities for tribal student engagement may be possible through programs at non-tribal schools, such as the Northwest Indian Applied Research Institute at the Evergreen State College (<http://nwindian.evergreen.edu/>) and the American Indian Studies Program at the University of Idaho (<http://www.uidaho.edu/class/interdisciplinary/aist>). Similar opportunities to build the capacity of tribal environmental professionals to address climate change issues may also be available outside the Northwest. For instance, the Institute for Tribal Environmental Professionals provides training, assistance and educational resources to tribes on climate change issues (<http://www4.nau.edu/itep/climatechange/>).

## Leveraging of Tribal Engagement by Other Organizations

To achieve efficiencies, the NW CSC is committed to leveraging ongoing tribal engagement efforts by other agencies and organizations, to promote synergies and avoid duplication of efforts. There are multiple examples of tribal engagement at regional and national levels, some of which are described here.

In the Northwest, there are three LCCs (the North Pacific, Great Northern, and Great Basin LCCs) that overlap the area of the NW CSC (fig. 2). LCCs, which were co-established with CSCs by Secretarial Order No. 3289, complement CSCs in that they focus on the application of science and tools to resource management. Similar to CSCs, LCCs are committed to working closely with tribes and some are already actively engaged with tribes. For example, the North Pacific LCC has identified science and TEK priorities that need to be addressed to enable Pacific coastal tribes to optimize resource management decisions under climate change conditions, and it has funded several TEK-focused research projects. In 2012, two of those projects were co-funded by the NW CSC. Another organization in the Northwest with strong engagement with tribes is the Pacific Northwest Tribal Climate Change Network (PNTCCN; <http://tribalclimate.uoregon.edu/>), which is supported by the University of Oregon and U.S. Forest Service. The PNTCCN leads monthly conference calls with tribes, tribal organizations, agencies, and other interested parties. These calls are focused on coordination and collaboration among participants to address tribal needs related to climate change.

Nationally, there are multiple tribal engagement efforts focused on climate change. In the case of the DOI national CSC network, there is a strong emphasis to explore opportunities for cross-regional collaboration on tribally focused climate studies and identify tribal science priorities held in common among CSCs. Other federal agencies are also engaged with tribes in relation to climate change. For example, the U.S. Environmental Protection Agency (EPA) Tribal Science Council (TSC; <http://www.epa.gov/osp/tribes/tribes.htm>) has identified two national tribal science priorities: 1) climate change, and 2) integration of TEK in environmental science, policy, and decision-making. In EPA region 10 (<http://www.epa.gov/tp/whereyoulive/region10.htm>), which includes a large part of the geographic area of the NW CSC, local tribes host an annual Tribal Environmental Leaders Summit in partnership with the EPA. By collaborating, the NW CSC may be able to add a session or a workshop or meeting immediately before or after the summit, thereby minimizing travel costs for tribal staff and maximizing the number of tribal staff who can participate in a face-to-face meeting. Similarly, large tribal organizations, such as the ATNI (<http://www.atntribes.org/>), the National Congress of American Indians (NCAI; <http://www.ncai.org/>), and the National Tribal Environmental Council (NTEC; <http://www.ntec.org/>) hold regular meetings, and the NW CSC may be able to partner with them on climate change issues and add face-to-face meetings to their regular meetings, depending on the meeting locations. There are also tribal climate change efforts with a national reach that the NW CSC may be able to participate in, such as the American Indian and Alaska Native Climate Change Working Group (<http://www.haskell.edu/climate/>).

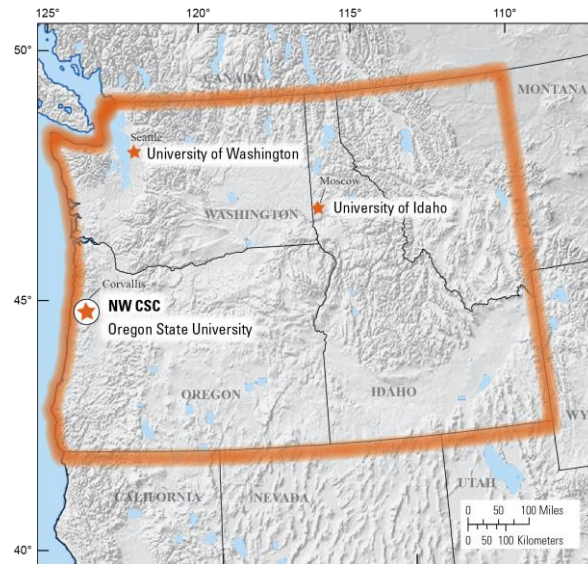


Figure 1. Geographic area of the Northwest Climate Science Center.

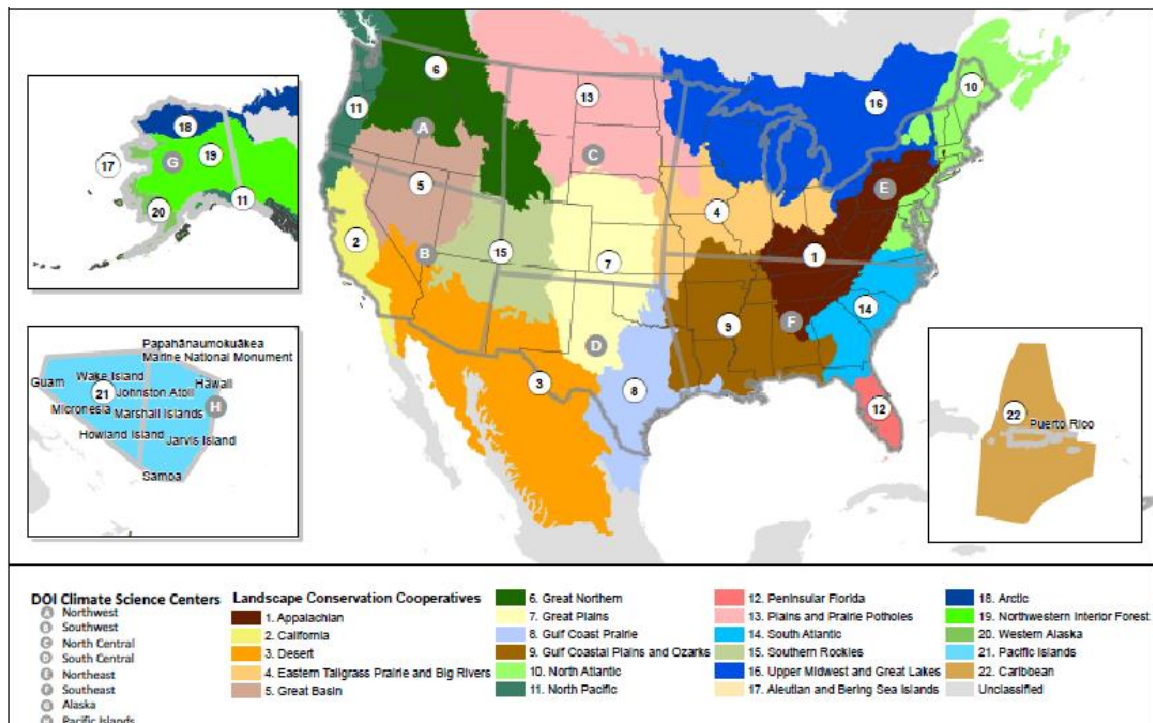


Figure 2. Geographic areas of all Climate Science Centers and Landscape Conservation Cooperatives.

## Appendix 1. Federally Recognized Native American Tribes within the Northwest Climate Science Center Area

<b>Name of federally recognized tribe (from Federal Register, August 12, 2012)</b>	<b>State in which tribe is present</b>
Hoop Valley Tribe	California
Karuk Tribe	California
Quartz Valley Indian Community of the Quartz Valley Reservation of California	California
Resighini Rancheria	California
Yurok Tribe of the Yurok Reservation	California
Coeur D'Alene Tribe	Idaho
Kootenai Tribe of Idaho	Idaho
Nez Perce Tribe	Idaho
Shoshone-Bannock Tribes of the Fort Hall Reservation	Idaho
Shoshone-Paiute Tribes of the Duck Valley Reservation	Idaho, Nevada
Northwestern Band of Shoshoni Nation	Idaho, Utah
Blackfeet Tribe of the Blackfeet Indian Reservation of Montana	Montana
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Montana
Burns Paiute Tribe	Oregon
Confederated Tribes of Siletz Indians of Oregon	Oregon
Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians	Oregon
Confederated Tribes of the Grand Ronde Community of Oregon	Oregon
Confederated Tribes of the Umatilla Indian Reservation	Oregon
Confederated Tribes of the Warm Springs Reservation of Oregon	Oregon
Coquille Indian Tribe	Oregon
Cow Creek Band of Umpqua Tribe of Indians	Oregon
Klamath Tribes	Oregon
Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation	Oregon, Nevada
Confederated Tribes and Bands of the Yakama Nation	Washington
Confederated Tribes of the Chehalis Reservation	Washington
Confederated Tribes of the Colville Reservation	Washington
Cowlitz Indian Tribe	Washington
Hoh Indian Tribe	Washington
Jamestown S'Klallam Tribe	Washington
Kalispel Indian Community of the Kalispel Reservation	Washington
Lower Elwha Tribal Community	Washington
Lummi Tribe of the Lummi Reservation	Washington

Makah Indian Tribe of the Makah Indian Reservation	Washington
Muckleshoot Indian Tribe	Washington
Nisqually Indian Tribe	Washington
Nooksack Indian Tribe	Washington
Port Gamble Band of S'Klallam Indians	Washington
Puyallup Tribe of the Puyallup Reservation	Washington
Quileute Tribe of the Quileute Reservation	Washington
Quinault Indian Nation	Washington
Samish Indian Nation	Washington
Sauk-Suiattle Indian Tribe	Washington
Shoalwater Bay Indian Tribe of the Shoalwater Bay Indian Reservation	Washington
Skokomish Indian Tribe	Washington
Snoqualmie Indian Tribe	Washington
Spokane Tribe of the Spokane Reservation	Washington
Squaxin Island Tribe of the Squaxin Island Reservation	Washington
Stillaguamish Tribe of Indians of Washington	Washington
Suquamish Indian Tribe of the Port Madison Reservation	Washington
Swinomish Indians of the Swinomish Reservation of Washington	Washington
Tulalip Tribes of Washington	Washington
Upper Skagit Indian Tribe	Washington